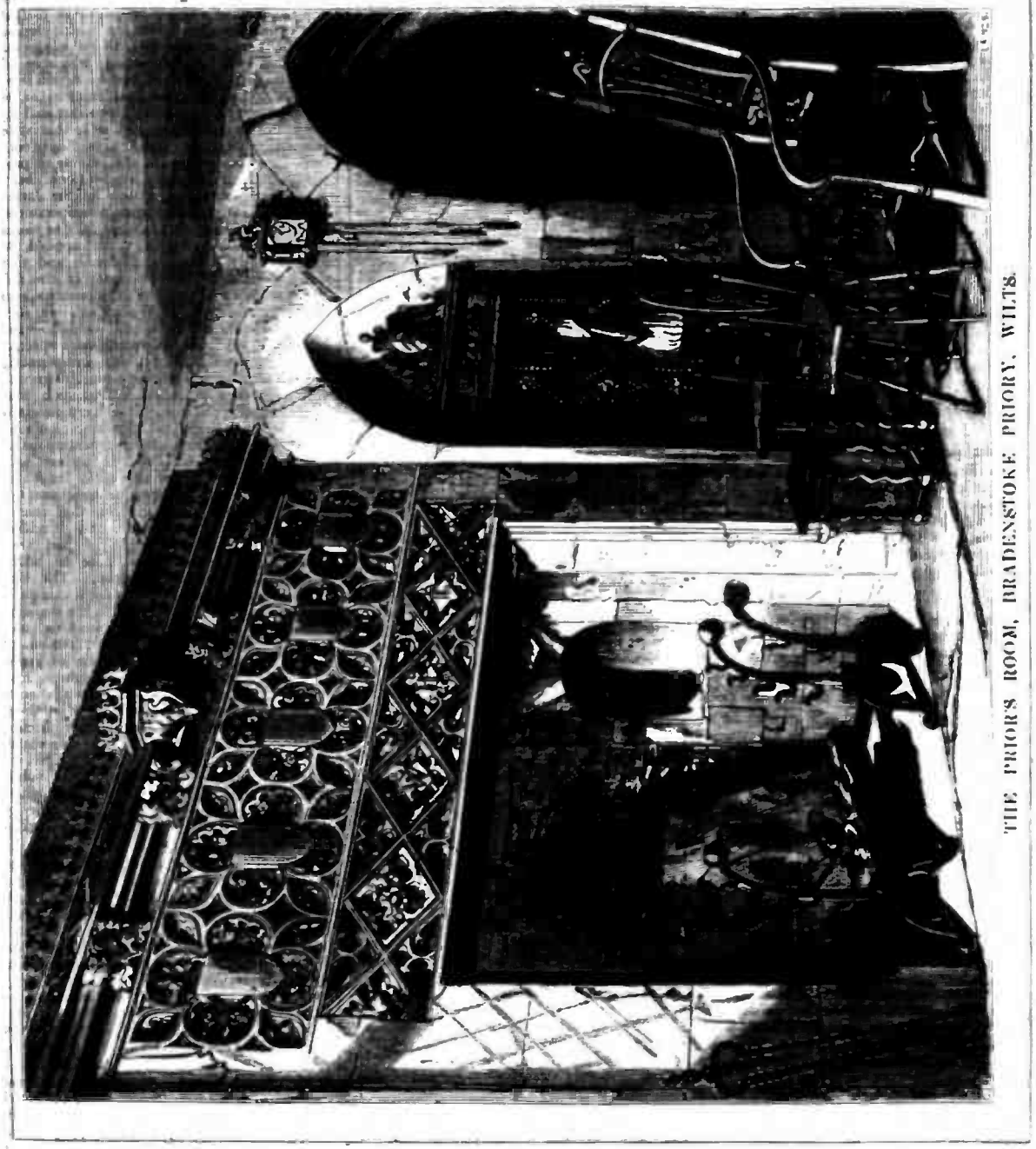

THE PRIOR'S ROOM, BRADENSTOKE PRIORY, WILTS.

might even be obtained by merely whirling a piece of heated iron rapidly through the ordinary atmosphere with a wire and string. Smithy ashes are scales of partially oxidized or burnt iron, formed by the more subdued burning of highly-heated iron in the open air even without any such artificial excitement. At a red heat, iron rapidly decomposes water and steam, and hence explosions are believed to arise from this powerful affinity of iron for oxygen suddenly liberating large volumes of hydrogen gas from the steam or water. The same affinity enables it, with the aid of high heat, even to decompose potash, or deprive the metalloid potassium of its oxygen, although the affinity of potassium for oxygen is so great that a piece of that substance, to outward appearance just like a piece of soft lead, will, when thrown into water, run along the surface of it burning and blazing, while it consumes the water or unites with its oxygen. It is almost needless to say, that if iron manifested *its* peculiar affinity for oxygen in so peculiar and inconvenient a way, we should have had little use of iron as a metal. Iron, however, as said, will corrode in water for all that, even at ordinary temperatures. Graham is of opinion that this is in general immediately occasioned by the formation of a subsalt of iron with excess of oxide, of which the acid is supplied by the saline matter in solution. As a preventive to this he thinks that "articles of iron may be completely defended from the injury occasioned in this way by contact with the more positive metal zinc, as in galvanised iron, while the protecting metal itself wastes away very slowly." It must be here noted, however, that this advice, though theoretically correct, implies the perfect purity of the zinc; for if it contain, as much of it does, either arsenic or sulphur, the very contrary may be anticipated. Arsenic is a much more *negative* metal than iron, though zinc be somewhat more positive than it, and will accordingly, on the very same theoretical grounds, decidedly tend to hasten the corrosion of the iron; and, as for sulphur, it is well known that in association with iron, *it* will cause the iron rapidly to rot in moisture, sulphurets of iron readily putrifying, decomposing water, and forming sulphuretted hydrogen on the one hand, and iron rust or oxide on the other. And, indeed, as arsenic is but a metallic sulphur after all, there is not the least doubt that arsenical pyrites, or arseniuret of iron, will also rot just as readily as ordinary pyrites, or sulphuret of iron. It is thus that we would attempt to explain some contradictory testimony on the subject of galvanised iron. The perfect purity of the zinc is a point of great importance.

We find it impossible to exhaust the subject of iron and its properties, even in a very elementary and humble way, in a single article, and must therefore recur to this important subject at another fitting opportunity.

THE PRIOR'S ROOM, BRADENSTOKE PRIORY.

Our view represents the only interior remaining at the ancient Priory of Bradenstoke, in Wiltshire, a few miles from Chippenham; the building is now a humble farm-house, difficult of access, and seldom visited. A small portion of the structure alone remains; there are some very good windows, and an interesting crypt, which adjoins the room shown in the view, and the entrance to which is by a

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